DUO LIMISTAT

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for the measurement of pressure and temperature.

Applications

- HVAC
- Refrigeration

Features

- With 2 individual measuring systems
- Short response time
- Protection IP54
- Electrical connection on terminal screw

11/2017
Data sheet H72142m
Subject to change

Technical Data			
Designation of application	Double thermostat with remote sensor and limiter	Switching differential	Adjustable / not adjustable
Measuring range	-30°C ... +40°C to +70°C ... +350°C	Repeatability	± 0.5 % FS typ.
Output signal	Floating change-over contact	Approval / conformity	EN60730-1/ EN60730-2-9: Typ 2.B.H

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trafag
sensors controls

Ordering information/type code

		302 . XX	XX	XXX	XX	XXXXXXXXX	XX	XX

Microswitch

Small switching differential, not adjustable (Microswitch 10, Limiter Switch 12)	38
Standard switching differential, not adjustable (Microswitch 11, Limiter Switch 12)	37
Adjustable standard switching differential (microswitch 25, limiter switch 12)	58

Range

Temperature controller and limiter [°C]	Sensor max. [°C]	Temperature controller [°C]	Limiter [°C]	
-30 ... +40	+50			01
-10 ... +25	+60			07
0 ... +35	+70			09
+10 ... +45	+85			11
+10 ... +80	+100			13
+15 ... +30	+60			17
-10 ... +35	+70			94
-10 ... +80	+85			95
+5 ... +95	+105			20
+20 ... +110	+115			23
+20 ... +150	+165			31
+20 ... +230	+250			24
+40 ... +300	+330			53
+70 ... +350	+380			54
		+5 ... +95	+20 ... +110	36
		+20 ... +150	+35 ... +175	42
		+40 ... +300	+70 ... +350	39

Sensor [1)]

Range	Sensor diameter [mm]	Sensor material	
01, 07, 09, 11, 13, 17	Ø7	Stainless steel	421
94, 95, 20, 23, 31	Ø4.7	Stainless steel	311
94, 95, 20, 23, 31	Ø7	Stainless steel	321
24, 53, 54	Ø4.7	Stainless steel	111
24, 53, 54	Ø7	Stainless steel	121
01, 07, 09, 11, 13, 17	Ø4.7	Copper	412
01, 07, 09, 11, 13, 17	Ø7	Copper	422
01, 07, 09, 11, 13, 17	Ø5.5/11	Copper	462
94, 95, 20, 23, 31	Ø4.7	Copper	312
94, 95, 20, 23, 31	Ø7	Copper	322
94, 95, 20, 23, 31	Ø5.5/11	Copper	362
24, 53, 54	Ø4.7	Copper	112

Range	Sensor diameter [mm]	Sensor material	
24, 53, 54	Ø7	Copper	122
24, 53, 54	Ø5.5/11	Copper	162
01, 07, 09, 11, 13, 17	Ø4.7	Copper nickel plated	413
01, 07, 09, 11, 13, 17	Ø7	Copper nickel plated	423
01, 07, 09, 11, 13, 17	Ø5.5/11	Copper nickel plated	463
94, 95, 20, 23, 31	Ø4.7	Copper nickel plated	313
94, 95, 20, 23, 31	Ø7	Copper nickel plated	323
94, 95, 20, 23, 31	Ø5.5/11	Copper nickel plated	363
24, 53, 54	Ø4.7	Copper nickel plated	113
24, 53, 54	Ø7	Copper nickel plated	123
24, 53, 54	Ø5.5/11	Copper nickel plated	163

Fixing [2)]

For remote sensing version	19
For direct mounting version	21

Protection tube

See specification H72114/H72163	XXXX.XXXX

	302 . XX	XX	XXX	XX	XXXXXXXXX	XX	XX

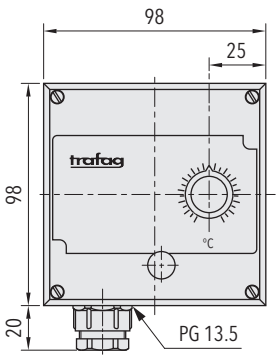
Accessories	Signal lamp	**14**
	Condensator over Pin 1-2	**12**
	Condensator over Pin 1-3	**13**
	Condensators over Pin 1-2 / 1-3	**23**
	Railway version IEC 61373, category 2	**28**
	Outdoor application (vented)	**44**
	Capillary tube protection: Flexible metal tube, brass nickel plated	**90**
	Capillary tube protection: Flexible metal tube 1.4541/V2A	**91**
	Capillary tube protection: PVC tube	**92**
Capillary tube length	Capillary tube length up to 5000 mm (no specification required for direct mounting on protection tube) **L=XXXX** [3]	

[1] See data sheet H72114/H72163
[2] See data sheet H72106
[3] Overlengths upon request

Standard products (extra short lead time)

Product No.	Type Code	Temperature range [°C]	Switching differential [°C]	Measuring range limiter [°C]	Sensor max. [°C]
D95R	302 5836 362 19	+5 ... +95	2 ... 12 (adjustable)	+20 ... +110	105
D150R	302 5842 362 19	+20 ... +150	2.5 ... 16 (adjustable)	+35 ... +175	165
D300R	302 5839 162 19	+40 ... +300	4 ... 40 (adjustable)	+70 ... +350	380

Dimensions



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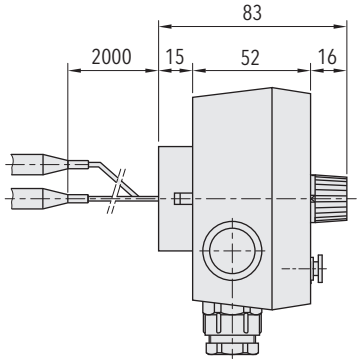
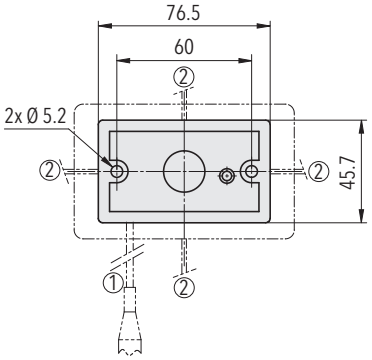




Fixation **19**

Specifications

Accuracy	Repeatability	± 0.5 % FS typ.
	Scale accuracy typ.	± 2 % FS typ.
	Switching differential	See table
	Switching point	Temperature compensated with bimetal switch lever
Environmental conditions	Ambient temperature	Range ≤ +45°C: -30...+50°C Range +45...+250°C: -30...+70°C Range > + 250°C: -10...+70°C (Important: Temperature at sensor may not exceed maximum sensor temperature)
	Storage temperature	Range < +45°C: -30...+50°C Range > +45°C: -30...+85°C
	Protection	IP54
	Humidity	Max. 95 % relative
Mechanical Data	Sensor housing	See ordering information
	Filling	Liquid
	Housing	Noryl
	Screwed cable gland	PA, Polyamid
	Installation	Any position
	Weight	~ 620 g
Microswitch	Rating	See table
	Resistance of insulation	> 2 MΩ
	Dielectric strength	U ≤ 250V: 1.45 kV U ≤ 500V: 2 kV terminal ground
	Life time (mechanical)	Microswitch 10/11/25: 20 Mio. cycles Microswitch 12: 0.3 Mio. cycles
Electrical connection	Cable gland	PG13.5 Cable-Ø 5...12.5 mm
	Terminal screw	6 x 1...2.5 mm²

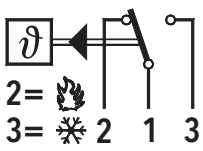
Additional information

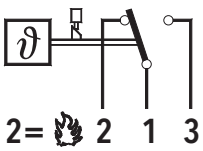
Documents	Data sheet	www.trafag.com/H72142
	Instructions	www.trafag.com/H73170
	Flyer	www.trafag.com/H70963

Switching differential typ.						
Range	**[°C]**	–30 ... +40 –10 ... +25 0 ... +35 +15 ... +30 +10 ... +45 +10 ... +80	–10 ... +35 –10 ... +80 +5 ... +95 +20 ... +110	+20 ... +150	+20 ... +230	+40 ... +300 +70 ... +350
Microswitch 10 Switching differential (fixed value, not adjustable)	**[°C]**	0.3	0.8	1	1.2	2
Microswitch 11 Switching differential (fixed value, not adjustable)	**[°C]**	0.7	2	2.5	3	4
Microswitch 12 Switching differential (fixed value, not adjustable)	**[°C]**	2	6	7.5	9	12
Microswitch 25 Switching differential (adjustable value)	**[°C]**	0.7 ... 10	2 ... 12	2.5 ... 16	3 ... 32	4 ... 40

Electrical data switch			
		Rating Resistive Load (Inductive Load)	
Type	**Features**	**AC**	**DC**
10	Small switching differential, not adjustable	125 V, 10 (1.5) A 250 V, 10 (1.25) A	250 V, 0.2 (0.02) A 125 V, 0.4 (0.03) A 30 V, 2 (1) A 14 V, 15 (2.5) A
11	Average switching differential, not adjustable	125 V, 15 (1.5) A 250 V, 15 (1.25) A 500 V, 10 (0.75) A	250 V, 0.25(0.03) A 125 V, 0.5(0.05) A 30 V, 6 (1.5) A 14 V, 15 (1.5) A
12	Large switching differential, not adjustable	125 V, 15 (1.5) A 250 V, 15 (1.25) A 500 V, 10 (0.75) A	250 V, 0.3(0.2) A 125 V, 0.75(0.4) A 30 V, 15 (1.5) A 14 V, 15 (1.5) A
25	Adjustable standard switching differential	125 V, 15 (1.5) A 250 V, 15 (1.25) A 500 V, 10 (0.75) A	250 V, 0.25(0.03) A 125 V, 0.5(0.05) A 30 V, 6 (1.5) A 14 V, 15 (2.5) A

Electrical Connection





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